

EXHIBIT 1

**REDACTED VERSION
OF DOCUMENT
SOUGHT TO BE SEALED**

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

WAYMO LLC,)	
)	
Plaintiff,)	
)	
vs.)	Case No.:
)	3:17-cv-00939-WHA
UBER TECHNOLOGIES, INC.,)	
OTTOMOTTO LLC; OTTO TRUCKING)	
LLC,)	
)	
Defendants.)	

ATTORNEYS' EYES ONLY
VIDEOTAPED DEPOSITION OF ASHEEM LINAVAL
San Francisco, California
Thursday, April 13, 2017
Volume 1

Reported by:
RACHEL FERRIER, CSR No. 6948
Job No. 2594014
PAGES 1 - 92

1 remember at some point -- I don't know whether it was --
2 I don't know what the time frame was, but I do remember
3 reapplying to Berkeley City College.

4 Q So other than -- okay. Thank you.

5 Did you submit any other applications?

6 A Not to my knowledge.

7 Q Okay. What jobs did you apply for after you left
8 Google?

9 A I didn't. Not -- I mean not directly after.

10 Q Okay. What was your next job?

11 A I worked consulting. I was -- well, I worked
12 through Dogwood Leasing.

13 Q What is Dogwood Leasing?

14 A It's sort of -- could you ask a more specific
15 question?

16 Q I'm not sure that I can.

17 A Okay.

18 Q You said that you worked for a company called
19 Dogwood Leasing. I'm just asking you what it is.

20 A Well, it's a -- [REDACTED]

[REDACTED]

22 Q How did you come to do consulting for that
23 company?

24 A At some point I talked to Anthony, and he
25 indicated that there was work I could do.

ATTORNEYS EYES ONLY

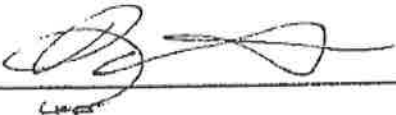
1 I, the undersigned, a Certified Shorthand
2 Reporter of the State of California, do hereby certify:

3 That the foregoing proceedings were taken before
4 me at the time and place herein set forth; that any
5 witnesses in the foregoing proceedings, prior to
6 testifying, were placed under oath; that a verbatim
7 record of the proceedings was made by me using machine
8 shorthand which was thereafter transcribed under my
9 direction; further, that the foregoing is an accurate
10 transcription thereof.

11 I further certify that I am neither financially
12 interested in the action nor a relative or employee of
13 any attorney or any of the parties.

14 IN WITNESS WHEREOF, I have this date subscribed
15 my name.

16
17 Dated: April 13, 2017
18
19
20
21

22 
23 _____

24 RACHEL FERRIER

25 CSR No. 6948

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CONTINUED VIDEOTAPED DEPOSITION OF ASHEEM LINAVAL

Volume 2

San Francisco, California

Tuesday, August 15, 2017

REPORTED BY:

JOHNNA PIPER

CSR 11268

JOB No. 2680991

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10:26:02

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10:26:41

10:26:45

1 spending some time at Chauffeur, and all of the

2 sudden have a solution to that problem?

3 MR. MUINO: Objection to form.

4 THE WITNESS: No.

5 BY MR. NARDINELLI:

6 Q. What I want to try to do now is trace

7 through the extent to which anything that was

8 developed at Tyto or Odin Wave -- and I'm just going

9 to call that Tyto. If there's a reason to

10 distinguish, let me know, but I'm just going to

11 blend them. I want to trace through whether

12 anything developed at Tyto currently exists at Uber.

13 A. Okay.

14 Q. Okay. So let's just start with a yes or no
15 question.

16 Is there anything that is currently under
17 development at Uber that derives in any way from
18 work that was performed at Tyto?

19 A. Work at Uber that was derived from work at
20 Tyto?

21 Q. Correct.

22 A. Yes.

23 Q. Okay. So let's just go through it.

24 Can you explain to me what Tyto-developed
25 technology currently exists in some form at Uber?

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1 A. As for the stuff that's -- that's going 10:26:47
2 into the -- the Fuji laser, I believe our current 10:26:52
3 system shares some of the same [REDACTED] [REDACTED]

4 [REDACTED] [REDACTED]
5 [REDACTED]. Actually, not that much, considering. 10:27:07

6 A lot -- I mean, it's -- it's a very 10:27:29
7 different type of laser than what we had -- Fuji is 10:27:31
8 a very different laser to what we developed at Tyto. 10:27:34

9 Q. Was Spider more similar to what you 10:27:39
10 developed at Tyto? 10:27:43

11 A. Spider was an attempt to cobble together a 10:27:43
12 multibeam laser out of parts of the Owl laser. 10:27:49

13 Q. Which parts of the Owl laser went into the 10:27:53
14 development of Spider? 10:27:55

15 A. [REDACTED] [REDACTED]
16 [REDACTED] [REDACTED]
17 [REDACTED] 10:28:20

18 Q. Walk me through at a high level what the 10:28:22
19 differences were between Spider and Owl. 10:28:26

20 A. I should preface this by saying that I only 10:28:33
21 started working on Spider when I was at Uber a few 10:28:40
22 weeks before Spider was shelved, so I may not have 10:28:44
23 all of the facts on this one, but I can -- I could 10:28:50
24 try. 10:28:54

25 Q. I appreciate that. And please proceed with 10:28:55

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10:28:58

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10:29:03

10:29:04

10:29:06

10:29:13

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10:29:40

10:29:59

10:29:59

10:29:59

10:29:59

10:29:59

10:30:10

1 that caveat in mind.

2 A. Okay.

3 What are the differences?

4 Q. Yeah, at a high level.

5 A. At a high level?

6 So we -- instead of having a -- a single
7 optical cavity, there were many optical cavities. I
8 think there -- I don't want to get this wrong. I
9 think there were eight optical cavities.

10 Q. That's right. Eight-leg spider.

11 Owl only had one optical cavity?

12 A. That's correct.

13 Q. Okay. So is Spider simply a matter of
14 taking the Owl and duplicating it eight times,
15 wiring it together?

16 A. Not quite. There was [REDACTED]

20 THE COURT REPORTER: I'm sorry. Like what?

21 THE WITNESS: Sorry?

22 THE COURT REPORTER: Say that again. I
23 couldn't hear you.

24 THE WITNESS: [REDACTED]

1 [REDACTED] [REDACTED]
2 [REDACTED] [REDACTED]
3 [REDACTED] 10:30:20
4 BY MR. NARDINELLI: 10:30:23
5 Q. You said that you wanted to make it more 10:30:23
6 like Velodyne, for example; is that right? 10:30:25
7 A. It would be -- it would have this -- a 10:30:29
8 comparable number of beams to Velodyne. 10:30:34
9 Q. Were you aware at that time of any 10:30:37
10 commercialized or commercializable self-driving car 10:30:44
11 LiDARs besides the one offered by Velodyne? 10:30:49
12 MR. MUINO: Objection to form. 10:30:54
13 THE WITNESS: Was I aware of any other -- 10:30:59
14 sorry. Could you repeat that? 10:31:01
15 MR. NARDINELLI: Sure. 10:31:03
16 Q. Were you -- were you aware of any other 10:31:03
17 existing self-driving car LiDAR solutions besides 10:31:05
18 the one offered by Velodyne? 10:31:10
19 A. At what point in time? 10:31:12
20 Q. When you were developing Spider, so let's 10:31:13
21 call that -- October of 2016. 10:31:17
22 A. Okay. Yeah, I was -- I was aware that 10:31:25
23 there were other LiDAR units made by other 10:31:27
24 manufacturers that were either designed for or had 10:31:29
25 been used in self-driving cars, for like example, 10:31:35

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1 LiDAR from SICK. 10:31:41

2 Q. How do you spell that? 10:31:45

3 A. S-I-C-K. 10:31:46

4 And I know that Bosch had designed and 10:31:49

5 produced some number of automotive grade LiDAR. 10:31:54

6 Q. Anybody besides Velodyne, SICK, or Bosch 10:31:58

7 developing self-driving car LiDAR at that time? 10:32:03

8 A. I can think of a couple. So -- I mean, at 10:32:05

9 some point they just become LiDAR and -- and they're 10:32:14

10 just kind of more general purpose. 10:32:17

11 I know that like ASC have produced LiDAR 10:32:19

12 that have been tried on autonomous vehicles. And 10:32:23

13 there's a company called Quanergy that was early in 10:32:31

14 development of -- of LiDAR for -- that were 10:32:38

15 applicable to self-driving cars. There's another 10:32:41

16 company that I can't remember the name of. But 10:32:44

17 there are a few players on the field. 10:32:47

18 Q. So coming to today, speaking of your 10:32:48

19 knowledge today, you're aware of LiDAR from at least 10:32:54

20 Velodyne, SICK, Bosch, ASC, Quanergy, and probably 10:32:59

21 some others; is that right? 10:33:04

22 A. That's right. 10:33:05

23 Q. Is there any specific others that you can 10:33:06

24 add to that list? 10:33:09

25 A. Not that I'm able to recall right now. 10:33:09

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1 Q. Of all of the LiDAR units that you are 10:33:13
2 aware of from the manufacturers that you've named or 10:33:20
3 others that you're familiar with but can't remember 10:33:24
4 the name of the manufacture, of all the self-driving 10:33:27
5 car LiDAR that you're aware of, do any besides Fuji 10:33:32
6 use [REDACTED] in the transmit block? 10:33:35

7 MR. MUINO: Objection to form. 10:33:43

8 THE WITNESS: Fuji -- Fuji has two optical 10:33:44
9 cavities [REDACTED]. Have to 10:33:52
10 make that distinction there. And based on my very 10:33:57
11 limited knowledge of the inner workings of -- of 10:34:02
12 those other LiDAR, I have to say that I don't -- I 10:34:08
13 don't know. 10:34:11

14 BY MR. NARDINELLI: 10:34:12

15 Q. Other than Fuji, you're not aware of any 10:34:12
16 LiDAR that has a total of 64 laser diodes [REDACTED] [REDACTED]
[REDACTED]; is that right? 10:34:23

18 A. I'm aware of LiDAR that have 64 lasers. 10:34:26
19 It's a nice round number, Base 2, but I'm not aware 10:34:30
20 of -- I'm not aware -- aware of a specific 10:34:34
21 configuration on another LiDAR that arranges them in 10:34:38
22 [REDACTED] [REDACTED]
[REDACTED] across two different optical cavities. 10:34:53

24 Q. Are you aware of any specific configuration 10:34:56
25 on any other LiDAR that arranges 64 laser diodes 10:35:00

1 that LiDAR to configure the [REDACTED] [REDACTED]
2 [REDACTED]? 10:36:28
3 MR. MUINO: Objection to form. 10:36:30
4 THE WITNESS: Sorry. Could you rephrase 10:36:31
5 that more specifically? What do you -- what do you 10:36:35
6 mean by configure? 10:36:38
7 BY MR. NARDINELLI: 10:36:39
8 Q. Outside of Fuji, are you aware of any 10:36:43
9 self-driving car LiDAR that uses [REDACTED] [REDACTED]
10 [REDACTED] 10:36:49
11 A. [REDACTED] [REDACTED]
12 [REDACTED] I believe Velodyne do something 10:36:59
13 similar. 10:37:04
14 Q. Anyone besides Velodyne? 10:37:05
15 A. Not that I'm currently aware of. 10:37:07
16 Q. Okay. So going back to the relationship 10:37:17
17 between Owl technology and Fuji. You said that 10:37:20
18 [REDACTED] [REDACTED]
19 [REDACTED]; is that right? 10:37:28
20 A. There are aspects of those that are carried 10:37:31
21 over, yes. There -- yeah. 10:37:33
22 Q. Fair enough. 10:37:34
23 Let's just take them one by one. 10:37:35
24 Can you tell me what aspects of the [REDACTED] [REDACTED]
25 [REDACTED] from Tyto have carried over into the Fuji 10:37:40

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1 design?

10:37:43

2 A. I haven't worked on that directly, and it
3 -- it's possible that quite a bit of it has changed.

10:37:46

10:37:56

4 Q. So you don't have knowledge one way or the
5 other of precisely what parts of the Tyto [REDACTED]

10:37:59

6 [REDACTED] currently exists in Fuji?

10:38:06

7 A. That's correct.

10:38:08

8 Q. How about the [REDACTED] [REDACTED]

9 [REDACTED]

10:38:14

10 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

10:39:10

[illegible]

[illegible]

1 Q. [REDACTED] [REDACTED]
[REDACTED] [REDACTED] [REDACTED]
[REDACTED] [REDACTED] [REDACTED]
[REDACTED] [REDACTED] [REDACTED]
[REDACTED] [REDACTED] [REDACTED]
[REDACTED] [REDACTED] [REDACTED]
[REDACTED] [REDACTED] [REDACTED]
[REDACTED] [REDACTED] [REDACTED] 10:41:56
8 Q. Okay. So back at the beginning of your 10:41:57
9 testimony today I asked you what you worked on with 10:42:09
10 respect to Fuji. You gave me four answers, and the 10:42:13
11 second one was laying out certain portions of the 10:42:15
12 [REDACTED] 10:42:19
13 Do you remember that testimony? 10:42:20
14 A. I do. 10:42:20
15 Q. And that's still your testimony, correct? 10:42:22
16 A. That is still my testimony. 10:42:24
17 Q. Can you describe first just at a high level 10:42:25
18 of what portions of the transmit board you have 10:42:27
19 worked on? 10:42:31
20 [REDACTED] [REDACTED] [REDACTED]
[REDACTED] [REDACTED] [REDACTED]
[REDACTED] [REDACTED] [REDACTED]
[REDACTED] [REDACTED] [REDACTED]
[REDACTED] [REDACTED] [REDACTED] 10:42:58
25 Q. What portion of the PCB layout did you do 10:43:07

CERTIFICATE OF REPORTER

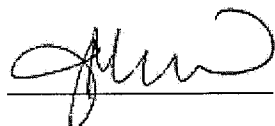
I, JOHNNNA PIPER, a Certified Shorthand Reporter, hereby certify that the witness in the foregoing deposition was by me duly sworn to tell the truth, the whole truth, and nothing but the truth in the within-entitled cause;

That said deposition was taken in shorthand by me, a disinterested person, at the time and place therein stated, and that the testimony of the said witness was thereafter reduced to typewriting, by computer, under my direction and supervision;

That before completion of the deposition, review of the transcript []was [X]was not requested. If requested, any changes made by the deponent (and provided to the reporter) during the period allowed are appended hereto.

I further certify that I am not of counsel or attorney for either or any of the parties to the said deposition, nor in any way interested in the event of this cause, and that I am not related to any of the parties thereto.

DATED: 8/16/2017



JOHNNNA PIPER, CSR NO. 11268